Operations Analysis Procedures

Purpose

Comprehensive instructions for compiling all data in the Operations Analysis sections of the quarterly "McNamara" projects are contained herein. Specifically, these instructions refer to the tables listed on pages A-22 through A-29 of The Rolling Thunder Program--Present and Potential Target Systems (Mac IV). These tables are presented in completed form in [   ] final draft of Mac IV. Although it seems possible that some of the information contained in this draft may be superfluous or irrelevant to future operations analysis projects, an exercise in compiling this data provides an adequate foundation in knowledge of the data base and procedures for use in compiling future project data.
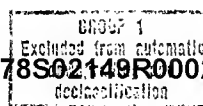
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Materials

The following materials are primary to the operations analysis effort, and are filed in a folder tabbed "Operations Analysis," and in a card box file, both of which are stored in safe D-2892 (Dave's safe). Other backup material is filed in safe 6833, second drawer from bottom.

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1. [   ] final draft of the Mac IV project.

2. Glossary of terms.

3. An "Ordnance" sheet, listing true weight, designations and costs of all types of air delivered munitions used thus far in Southeast Asia (SEA).

4. Pre-madeup worksheet tables for time periods succeeding 1966 corresponding to the tables in the final draft of Mac IV.

Army review(s) completed.

5. A duplicate copy of these procedures.

6. JCS fixed target data cards.

7. A publication entitled, <u>Assessment of the Air Effort in Vietnam and Laos</u>, put out in December 1965 by a Strategy and Tactics Analysis Group of the US Army. ("The STAG book" for short.)

8. Table 7-A, from the NMCC computer files.

Procedures

I. <u>Fixed Target</u>

Record fixed target strike data on a daily basis. Data is entered on cards filed in the card box file as suggested by a format printed on the card -- one strike on each card. Classify each strike as either armed recce (AR) or fixed target (FT). Data concerning the date of the strike, the JCS number and description of the target struck, the number and type (attack or support)* of aircraft involved, the losses of both aircraft and personnel, and the amounts and types of ordnance expended are taken from the BDA. Aircraft overhead costs and costs of aircraft losses are computed from the <u>Assessment of the Air Effort in Vietnam and Laos</u>, (the STAG book), Appendix II, Tab B, Columns K** and L. Ordnance true weight and cost are computed by reference to the "Ordnance" sheet, or by use of the STAG book, Appendix II, Tab A. (Ordnance sheet data is more comprehensive.)

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*Attack aircraft include both strike and flak suppression categories. Support aircraft are compiled from all the rest.

**Column K is used to compute Fixed Target sortie overhead only. As indicated below, column I is used to compute Total and Armed Reconnaissance sortie overheads.

At the end of each accounting period, sum data on cards and enter pertinent totals in columns 2 and 3 of Table 6, columns 2 and 3 of Table 9, Table 11,   columns 5 and 6 of Table 17 and all parts of Tables 18 through 26. (Check totals with relevant analysts before finalizing them -- for example, data for Table 26, "Statistical Summary of Attacks on Electric Power Facilities in North Vietnam" should be

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coordinated with [   ] Column 1 of Table 17 is

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copied from the DRV Target Analysis book, which [   ] has on file.

II. Armed Reconnaissance

Data in the remainder of the tables involving fixed targets, and in all other tables, can now be calculated by determining residuals using the fixed target data and data given in the Southeast Asia Statistical Summary, tables #211 and #'s 310 through 313. Relevant cost data are calculated from the STAG book, Appendix II, Tab B, Columns I and L, and from the "Ordnance" sheet.

For greatest simplicity of execution, the following order is suggested for filling out the tables. Appropriate comments and directions are given for those items in each table that are not self-explanatory. All table numbers numerically less than 27, and all column numbers refer to the pre-madeup worksheet tables.

1. Table 2 - All information can be extracted from table 311 of the SEA Stat. Sum. "Support" sorties are summed from the CAP/Escort, Recce and Other columns.

2. Table 3 - All information from table 312 of the SEA Stat. Sum.

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3. Table 4 - All information from table 313 of the SEA Stat. Sum.

4. Table 5 - Appropriate items and columns in Tables 2, 3, and 4 should add to corresponding items and columns in Table 5. Table 5 essentially is a summation of tables 2, 3, and 4. (Cross-check should be made with table 310 in the SEA Stat. Sum.)

5. Table 6 - Fill in column 6 from table 311 of the SEA Stat. Sum. (This should check with column 9 of Table 2.) Column 4 is the residual obtained from subtracting column 1 from column 6. Columns 7 through 10 are compiled from the appropriate months of table 311 of the SEA Stat. Sum.

6. Table 7 - This data is computed from NMCC computer file material - table 7-A.

7. Table 8 - All columns can be filled in from the appropriate month-page of table 211 in the SEA Stat. Sum. Figures should be read across on the row entitle, "Munitions Delivered-Tons."

8. Table 9 - Column 6 is taken from the appropriate month-pages of table 211 in the SEA Stat. Sum. (Cross-check should be made with column 5 of table 8.) Column 4 is a residual obtained by subtracting column 1 from column 6.

9. Table 10 - All columns can be filled in from the appropriate month and column number of table 211 in the SEA Stat. Sum. as in Table 8. Column 1 corresponds to column 5 in Table 8, and column 6 in Table 9.

10. Table 1 - Necessary totals are now available to fill in Table 1. Column 1 is taken from columns 7, 8, 9, and 10 of Table 6 and

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column 3 from columns 1, 2, 3, and 4 of Table 8. Column 5 is summed from the appropriate months of table 312 of the SEA Stat. Sum., column 7 from table 211, column 9 from table 313 and column 11 from table 211. Columns 13 and 15 are summed <u>across</u> the Table, and should cross-check with totals for appropriate numbers of months from tables 310 and 211 of the SEA Stat. Sum. Total-area data in Table 1 (bottom row) should cross-check with totals in Tables 2, 3, 4, 5, 6, 8, 9, and 10.

11. Table 12 - Aircraft losses are computed from table 311 of the SEA Stat. Sum. Data for personnel losses is obtained from the NMCC computer files. _____ is the man to call.)

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12. Table 13 - All columns of this table can be computed from table 311 of the SEA Stat. Sum.

13. Table 14 - All columns are compiled from tables 310 through 313 of the SEA Stat. Sum.

14. Table 15 - Statistics in all columns of this table can be computed using data in the SEA Stat. Sum., the STAG book and internal office resources. For column 1, numbers of aircraft losses over North Vietnam by type and month, taken from the appropriate month-pages of table 311 in the SEA Stat. Sum., are multiplied by average cost of aircraft data listed in the STAG book, Appendix II, Tab B, column L. Column 2 is computed by multiplying data in the "Flying Hours" column of table 311 in the SEA Stat. Sum. by the appropriate aircraft cost data in the STAG book, Appendix II, Tab B, column I. Column 3 is derived

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from the "North Vietnam - Total" columns of the appropriate month of

table 211 in the SEA Stat. Sum., multiplied by corresponding cost data

for each type bomb listed in the "Ordnance" sheet, or in the STAG book,

Appendix II, Tab A.   (Ordnance sheet is more comprehensive.)   Column 5

data can be obtained from [   ]

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    15.   Table 16 - Using appropriate corresponding tables in the

STAG book and the SEA Stat. Sum., Table 16 is derived similarly to

Table 15.   Columns 1 through 4 correspond to columns 1 through 4 of

Table 15.

    16.   Data in the Graphic similar to "Old A-1" (Graphic A-1 in

MAC III and IV) are derived by using total sorties over SEA in January

1965 (2860 sorties) as a base index number of 100, and comparing, for

each month, totals of sorties over Laos, and over Laos plus North

Vietnam, as percentages of this base number.   Other graphics are

plotted similarly.

    17.   Data for order of battle table on page 2 is contained in

table 123 of the SEA Stat. Sum.

STAT

TRANSMITTAL SLIP	DATE 21 MAR '67
TO:	

ROOM NO.	BUILDING

REMARKS:

for your information

STAT

FROM:		
ROOM NO.	BUILDING	EXTENSION

FORM NO. 241
1 FEB 55   REPLACES FORM 36-8
WHICH MAY BE USED.   GPO : 1957—O-439445   (47)